STREPTOCOCCAL INFECTION OF THE SKIN IN CHILDHOOD.

BY L. FORMAN, M.D., M.R.C.P.

THE streptococcus is an organism playing an important part in all branches of medicine and surgery. This is true in dermatology. A visit to any skin clinic, particularly in a poor district, will show that a considerable proportion of the children attending are suffering from a streptococcal infection. It will be quickly realized that the clinical appearances to which it gives rise vary considerably and that the treatment is often difficult and prolonged.

The primary streptococcal lesion is either a bulla or a fissure.

The bullous eruption is seen in the early stage of acute streptococcal impetigo, attacking the face and the scalp. The contents are at first clear and then become turbid when secondarily infected with the staphylococcus.

The horny layer of the skin forming the roof of the blister quickly ruptures and a raw oozing surface is left. The lesions multiply during the first week and then after remaining stationary usually clear up quickly between three to four weeks from the onset, provided treatment has been adequate. The sudden improvement that is seen at this time suggests that an immunity to the infecting organism has been developing. Sometimes, however, the backs of the ears are involved or large crusted plaques develop on the scalp, the duration of which is much more prolonged.

In the acute stage, the most effective treatment in the writer's hands has been to put the patient to bed if the attack is at all severe. The lesions and the surrounding skin are frequently swabbed with the solution known as Eau d'Alibour :—

Copper sulphate	...	...	...	pts.	2
Zinc sulphate	...	...	...	pts.	7
Saturated camphor water	...	...	...	pts.	300

to be used diluted with 6 pts. of water. The cleansing is carried out at two-hourly intervals and a little of this drying paste applied to the raw surfaces :—

Glycerine	...	...	...	...	pts.	4
Liq. paraffin	...	...	...	...	pts.	8
Zinc oxide	...	...	...	...	pts.	100
Starch	...	...	...	...	pts.	100
Aq. dest.	...	...	...	...	pts.	100

The paste should be kept in a stone jar and if it becomes dry on keeping water can be added. Ointments with or without the mercurials are not indicated in acute impetigo, in fact, at times, they seem to be definitely harmful.

A patch which has become chronic will show, when the crust is removed, a more deeply ulcerated epidermis than the early bulla. The dried serum should be removed by fomentations or by swabbing with the Eau d'Alibour and the ulcers painted with 1 per cent. crystal violet in 2½ per cent. spirit, or a mercurial such as hyd. ammon. 10 gr., zinc oxide 2 drm., starch 2 drm., soft white paraffin ad. 1 oz.

Very frequently with the acute attack a fold of the skin will be attacked and a fissure formed at the lobe of the ear and around the nose. This often persists when the impetigo on the face has cleared.

If neglected, this fissuring extends up behind the ears and the opposing surfaces of the ears and the temporal and mastoid regions of the scalp are involved. The infection may spread up the sides of the scalp for a varying distance. In the worst cases the whole of the scalp is denuded of horny layer and is red, oozing and covered with crusts of dried serum giving an offensive odour.

This widespread catarrhal or eczematous stage is a dermatological tragedy. The children are of poor homes usually, where hygiene is unsatisfactory and nutrition is faulty, lacking the anti-infective vitamin factors.

They may have to be hospitalized for periods up to eighteen months and the probability of relapse is very great. The clinical picture of this generalized *chronic impetigo* is characteristic. The child is flabby and pale with poor musculature. The whole of the scalp and the backs of the ears are red, raw, oozing and crusted. There is a thin, nasal discharge and the anterior nares are coated with crust. Fissures are to be seen just within the vestibule of the nose. The angles of the mouth are also fissured. There is a mild blepharitis, the lid margins being crusted and the lashes stuck together. The resistance of the skin may further break down, and all the folds of the body, the armpits, the antecubital and politeal spaces may be raw and oozing. Crusted lesions may also appear on the body.

As improvement takes place the skin becomes drier and the horny layer tries to re-form. At first, however, it is imperfect and desquamates readily as scales. This parakeratotic stage may persist for many months. This horny layer, it is important to realize, is vulnerable, and the streptococcus is still present and active and can be recovered from the scales.

The patches on the scalp may be discrete, and if seen without a knowledge of the previous impetigo may give rise to the suspicion of ringworm.

The treatment of this chronic impetigo must vary with the stage at which it is seen. Most dermatologists will have arrived at a plan of campaign, and no attempt will be made to detail all the preparations which can be used.

The scales and the crusts on the scalp should be removed with the antiseptic lotion mentioned above, but not by vigorous rubbing. Starch poultices for a few days will also help to clear them up. The watery zinc paste can be applied until the oozing has diminished. Then the whole of the scalp including the ears, and the flexures of the body if involved, are painted with 2 per cent. silver nitrate in water and later with the crystal violet. In treatment of the folds care must be taken that they are well opened up and the fissure at the bottom exposed and the lotion applied.

Young children frequently do a good deal of rubbing and scratching, with the result of spreading the infection ; to prevent this, the arms should then be kept in splints of stiff cardboard.

When the parakeratotic horny layer is forming the following may be applied :—

Liq. picis carb.	...	...	...	℥ 25
Ichthyol	...	...	...	gr. 5
Zinc oxide	...	...	...	drm. 4
Starch	...	...	...	drm. 1
Olive oil	...	...	...	drm. 3
Adeps lanæ	...	...	...	drm. 1
Aqua calcis	...	...	...	drm. 3

The strength of the tar can be increased up to the following tar-paste, which is often very well tolerated with good results :—

Crude coal tar	...	...	...	pts. 2
Zinc oxide	...	...	...	pts. 2
Mix.				
Corn starch	...	...	...	pts. 16
Petrolatum	...	...	...	pts. 16
Mix and combine both.				

This should be cleaned off with olive oil.

Treatment should be continued on these lines until the horny layer is normal and the fissures have quite healed.

A word may be said about the blepharitis. It often persists after the remainder has cleared up. It is a danger area, as it provides a focus for a general relapse. The lids should be bathed every two hours and the crusts removed. A weak mercurial such as ung. hyd. ox. flav. should be applied thickly.

Some authorities have advocated epilation of the scalp in the catarrhal stage. There is no doubt that the period of the treatment is greatly curtailed in many cases if this is done. It can be carried out by X-rays or thallium acetate (if the child is under the age of 7 years).

Treatment on general lines is important and will include abundant good food, vitamin A, and exposure to the ultra-violet lamp. Streptococcal vaccines are of use given intradermally, the dosage being adjusted so that reactions are not excessive, the first dose being 2 mils. Protein shock therapy, using sterile milk intramuscularly, has appeared to benefit some very chronic cases.

The after-care of these children is extremely important. Their health should be maintained at a high level and care should be taken that they are kept out of doors when possible. After an attack they should have a period of convalescence for at least six months. Regular inspection of the skin should be maintained for at least two years. Fissures about the nose and the ears are very liable to recur and should be promptly and carefully treated.

The importance of this is because relapses can occur up to adult life and many cases of sycosis follow a chronic blepharitis and a streptococcal rhinitis. Recurrent erysipelas of the face with permanent blocking of the lymphatics and chronic œdema is liable to occur when fissures return in the nose.

COMMENTS ON A CASE OF RENAL FAILURE.

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THIS patient, a man aged 52 and a labourer, was well until eight months ago, when he began to complain of thirst, nocturnal frequency and polyuria. Six months ago he woke up one morning to find that he had partially lost the sight of his left eye, and it was at about this time that he began to complain of rather frequent and severe attacks of headache. His sight recovered gradually, but about one month ago there was a similar occurrence, and he says the vision of the left eye, though improving, is still impaired. Recently he has had several attacks of vomiting without any pain, and his friends have